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10/087,237	03/01/2002	Ajay Kumar	5681-07800	6956

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EXAMINER
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HOANG, PHUONG N

ART UNIT	PAPER NUMBER
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2194

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09/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/087,237	Applicant(s) KUMAR ET AL.	
	Examiner Phuong N. Hoang	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/5/05 &amp; 11/10/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 – 50 are pending for examination.

#### ***Claim Objections***

2. Claims 39 and 50 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

#### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 and 14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 of copending Application No. 10/087,652 (refer as 652). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The difference between the application no. 652 and this case is the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art would recognize that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1, 14, 26, 29, and 40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 15, and 21 of copending Application No. 10/087,224 (refer as 224). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the application no. 224 and this case are the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art would recognize that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 1, 14, 26, 29, and 40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 15, and 21 of copending Application No. 10/087,225 (refer as 225). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the application no. 225 and this case are the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art would recognize that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1, 14, 29, and 40 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, and 9 of copending Application No. 10/087,197 (refer as 197). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer system comprise substantially the same elements. The differences between the application no. 197 and this case are the claimed object graph comparison of

mutably accessed attributes of the client state of the session data with a benchmark version of the client state of the session data to determine a subset of modified attributes. It would have been obvious to one of ordinary skill in the art would recognize that the comparison has to be performed to have the modified attributes for the synchronization step.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claim 26 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, 17, 26, and 35 of copending Application No. 10/087,234 (refer as 234). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the application no. 234 and this case are the claimed tack accesses of mutable attributes, determining a set of mutably accessed attributes, determining a modified subset of attributes, and synchronizing the primary state of session data with the client state of the session data. It would have been obvious to one of ordinary skill in the art would recognize that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 26 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Zaiken, US patent no. 5,907,848.**

11. Court and Zaiken references were cited in the last office action.

12. **As to claim 26, Court teaches a system, comprising the steps of:**

means to lock (lock, col. 8 lines 12 – 25) access to a primary state of session data (the state information, col. 5 lines 30 – 33, col. 6 lines 49 – 55) configured for access by a plurality of application servers nodes or render engine, fig. 3a and col. 7 lines 30 – col. 8 lines 20) for a process executing on one of the plurality of application servers, wherein the session data comprises a plurality of attributes (information of user sessions, col. 6 lines 50 – 55);

wherein, while the primary state is locked for the process, other processes cannot access the primary state (it is the concept of locking);

wherein each of the plurality of application servers (nodes or render engine, fig. 3a and col. 7 lines 30 – col. 8 lines 20) comprises a client state of the session (state information of user session, col. 6 lines 50 – 55) data accessible to processes executing within the application server;

means for each of the application servers to:

track (track to know when the data need to update, col. 9 lines 45 – 65 and col. 5 lines 20 – 50) accesses of mutable attributes (mutable variable names or value in user session data, col. 10 lines 8 – 25) in the client state of the session data;

determine a set of mutably accessed attributes of the client state of the particular application server (get the current state information for that session data that comprise mutable variable names or value, col. 7 lines 60 – col. 8 lines 25 and col. 10 lines 8 – 25);

determine a subset of the set of mutably accessed attributes that are modified in respect to the primary state (the changes to that session, col. 8 lines 10 – 65, col. 10 lines 8 – 25, and fig. 4);

means to synchronize the primary state with the client state using the subset of modified attributes (the changes to the session state is written back to from session cache to global session server 208, col. 8 lines 10 – 65, and figure 4).



Courts does not explicitly teach the step of comparing to determining the changes. While Courts teaches a subset of modified attributes getting from the current accessed attributes and the previous version of attributes, the comparison step to get the subset of modified attributes is implied or obvious.

Zaiken teaches the step of comparison current and previous version of data in the session to determine the changes (compared the data values stored in the record with previously stored data values to find the match, col. 10 lines 1 – 30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Zaiken's system because Zaiken's comparing step would be necessary for the Courts's system to determine the changes between the current user state data and previous user state data.

13. **As to claim 27**, Courts teaches the step of wherein said means for each of the application servers to determine a set of mutably accessed attributes of the client state of the particular application server comprises tracking mutable accesses of the attributes in the client state (lock, col. 8 lines 10 – 65).

14. **Claims 29 – 36, 39 – 47, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Challenger, US patent no. 6,026,413.**

15. **As to claim 29**, Courts teaches a method comprising the steps of

tracking mutable accesses (track to know when the data need to update, col. 9 lines 45 – 65 and col. 5 lines 20 – 50) of a plurality of attributes of a client state of the session data (mutable variable names or value in user session data, col. 8 lines 1 – 25 and col. 10 lines 8 – 25), wherein the client state is associated with an application server (servers, col. 5 lines 30 – 35);

mutably accessed attributes (mutable variable names or value in user session data, col. 8 lines 1 – 25 and col. 10 lines 8 – 25), a subset of modified attributes (changes to the session state, col. 8 lines 10 - 25), wherein the benchmark version of the client state of the session data comprises a previous version of the attributes (session cache 206) in the client state of the session data; and

synchronizing a primary state of the session data with the client state according to the subset of modified attributes (the changes to the session state is written back to from session cache to global session server 208, col. 8 lines 10 – 65 and col. 10 lines 8 – 25), wherein the primary state is accessible by a plurality of application servers.

Courts does not explicitly teach the step of performing an object graph comparison to determine the changes. While Courts teaches a subset of modified attributes getting from the current accessed attributes and the previous version of attributes, the comparison step to get the subset of modified attributes is implied or obvious.

Chanllenger teaches the step of object graph comparison of current and previous version of state data (compared graph objects including the state data of two versions to determine whether the two versions are dissimilar or not, col. 28 lines 1 – 7 and col. col. 10 lines 36 - 43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Challenger's system because Chanllenger's comparing between current version with previous version would provide the Challenger's system the modified information between the current user state data and previous user state data for the synchronization step.

16. **As to claim 30**, Challenger teaches the step of wherein a mutable access comprises a write access to an attribute (write locks, col. 35 lines 55 - 65).

17. **As to claim 31**, Courts teaches the step of wherein said synchronizing comprises updating the primary state using the subset of modified attributes (update the changes to the session state from session cache to global session server 208, col. 8 lines 10 – 65).

18. **As to claim 32**, Courts teaches the step of locking the primary state (lock the global session server, col. 8 lines 10 – 60) for access by a process executing on the

application server, wherein, while the primary state is locked for access by the process, other processes on the plurality of application servers cannot access the primary state (it is the capability of locking).

19. **As to claims 33 and 34**, Courts teaches the step comprising of the process receiving a request to release locked (unlock, col. 8 lines 10 – 60) access to the primary state; and the process releasing the locked access to the primary state in response to said request.

20. **As to claim 35**, Challenger teaches the step of a thread (threads, col. 32 lines 5 – 12, and col. 33 lines 20 – col. 34).

21. **As to claim 36**, Court teaches the step comprising of determining differences between the primary state and a benchmark version of the primary state; and synchronizing another instance of the primary state (the changes to the session state is written back to from session cache to global session server 208, col. 8 lines 10 – 65) with the primary state using the determined differences.

22. **As to claim 39**, see discussion for claim 26 above.

23. **As to claim 40**, it is the software claim of claim 29. See rejection for claim 29 above.

24. **As to claims 41 – 47**, see rejection for claims 30 – 36 above.

25. **As to claim 50**, see rejection for claim 39 above.

26. **Claims 37 - 38, and 48 - 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Challenger, US patent no. 6,026,413, in view of Jackson, Pub no. 20030051145.**

27. Jackson reference was cited in the last office action.

28. **As to claims 37 and 38**, Courts and Challenger do not explicitly teach the step of performing a binary comparison of the primary state and the benchmark version of the primary state.

Jackson teaches the step of performing a binary comparison (data is sent in binary and compared, col. 3 [0022]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts, Challenger, and Jackson's system because Jackson's binary sending and comparison would keep the data to be more secured and the system run more efficiently.

29. As to claims 48 and 49, see rejection for claims 37 and 38 above.

***Allowable Subject Matter***

30. Claims 1 – 25 are allowed.

31. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

32. Applicant's arguments filed 4/14/05, with respect to claims 26 – 50, have been fully considered but they are not persuasive.

33. Applicant argued in substance that

(1) Applicant argued that claims 39 and 30 further limits the subject matter of claim 29. "Claim 29 recites "tracking mutable accesses of a plurality of attributes on a client state of session data". Claim 39 is concerned with tracking accesses (not necessarily just mutable accesses) of mutable attributes. Thus, claim 39 does provide further limitation on the subject matter recited in claim 29. Similar arguments apply to claim 50 as well."

(2) Court in view of Zaiken fails to teach the step of "track mutable accesses of the attributes". Court does not describe tracking accesses to individual mutable attributes in the session cache.

(3) Court in view of Zaiken fails to teach determining a set of mutably accessed attributes.

(4) It is unclear how Court system can include a subset of the mutably accessed attributes while Court teaches changes is written back to global session server. The cited portion of Zaiken does not teach comparing current and previous versions of data to determine the changes in session data.

(5) While Challenger teaches using object graphs for comparing different versions of data, Challenger has nothing to do with comparing mutably accessed attributes ..... modified attributes.

34. Examiner respectfully disagrees with applicant's remark

As to point 1, claim 39 does not further provide the limitation on the subject matter. "tracking mutable accesses of a plurality of attributes" or "tracking accesses of mutable attributes" have the same meanings. "tracking accesses" is not necessary just mutable access; however, the claimed limitation is "tracking access of mutable attributes", not tracking accesses of any attributes.

As to point 2, Examiner map more details to support and clarify the claimed limitation "track mutable accesses of the attributes". Applicant certainly admitted that Court teaches the claimed limitation (pages 18 and 22). Applicant did not claim tracking individual mutable attributes.

As to claim 3, Current state and session information comprise mutable variable names, col. 7 lines 60 – col. 8 lines 25 and col. 10 lines 8 – 25).

As to point 4, examiner mapped the claimed limitation on claim 26. Repeated claimed limitation on claim 29 has been mapped on the last office action. Even applicant acknowledged the cited portion, applicant missed to characterize the meaning of "modified attributes". Examiner clearly cited the modified attributes to "changes to session data". Also, applicant is supposed to read the cited reference as a whole.



While Court teaches the changes to session state are written to global session server (fig. 4 and col. 8 lines 10 – 25), the comparing step for the changes should be implied or obvious. Zaiken teaches comparing two versions of data to find a match (compared the data values stored in the record with previously stored data values to find the match, col. 10 lines 1 – 30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Zaiken's system because Zaiken's comparing step would be necessary for the Courts's system to determine the changes between the current user state data and previous user state data. It's a combination of Court and Zaiken, not any alone, teaches the claimed limitations.

As to point 5, it is the combination of Courts and Challenger, not any alone, teaches the claimed limitations. Court teaches mutably accessed attributes (mutable variable names or value in user session data, col. 8 lines 1 – 25 and col. 10 lines 8 – 25) benchmark version of the client state of the session data (session cache 206). Court teaches the determining the subset (changes to session state, col. 8 lines 15 – 25). Once Court teaches the current version, previous version, and the different or modified data between two versions, the comparison step should be implied or obvious. Examiner cited Challenger for teaching comparing the object graphs of two versions to determine whether they are different (compare objects.....dissimilar, col. 28 lines 1 – 8). 10 lines 36 - 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Challenger's system because Challenger's comparing between current version with previous

version would provide the Challenger's system the modified information between the current user state data and previous user state data for the synchronization step.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Phuong N. Hoang** whose telephone number is **(571)272-3763**. The examiner can normally be reached on **Monday - Friday 9:00 am to 5:30 pm**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph  
November 29, 2005

**WILLIAM THOMSON**  
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